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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,052	04/08/2004	Dustin Kirkland	AUS920031009US1	9656

7590 04/19/2006

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EXAMINER	
FIGUEROA, MARISOL	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,052	KIRKLAND ET AL.	
	Examiner	Art Unit	
	Marisol Figueroa	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-11 and 14-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-11 and 14-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Amendment

2. This Action is in response to Applicant's amendments filed on 02/02/2006. Claims 1, 4-11, 14-18 are pending in the present application. Claims 2, 3, 12, and 13 have been canceled.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 4-11, 14-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 10 is objected to because of the following informalities:

(a) On line 8 of claim 10, the word "capability" before "connection" should apparently be replaced with --availability-- in order to agree with the term "connection availability" recited earlier in the claim, on the second line. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1, 6-9, 11, and 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gandhi et al. (US 2002/0026624 A1) in view of Sauter et al. (US 2004/0209623 A1).

Regarding claims 1 and 11, Gandhi discloses a method for accurately conveying wireless connection availability through a tower in a defined area comprising the steps of:

determining the maximum capacity of the tower (see p.0008; it is inherent in wireless communication systems to establish a maximum capacity of a base station before admitting users in order to avoid interference and dropped calls);

monitoring the calling activity through the tower by maintaining a constant count of the number of wireless devices that are connected through a specific tower (see p.0026; Fig. 1, step 20; the base station accumulates information directed toward the reverse link loading, e.g. traffic loading, which corresponds with the number of wireless units accessing the system, i.e. count of wireless devices);

broadcasting a connection availability message to wireless devices in the area of the tower based on the detecting calling activity resulting from a maintained count of number of wireless devices connected through a specific tower (see p.0027; p.0032-0033; the base station broadcasts an availability message that conveys to wireless units in a sector of the availability of base station's resources which is equivalent to the connection availability of the base station).

However, Gandhi fail to expressly disclose establishing a threshold capacity of the tower; and detecting when the calling activity (e.g. traffic load) has exceeded the established threshold for the tower. In a related field of endeavor, Sauter teaches that it is notoriously well known that in a wireless communication network, the load is checked at regular intervals and compared with a

predetermined load threshold value, i.e. threshold capacity, and messages are broadcasted to subscribers to be barred from access, if the network load exceeds said predetermined threshold, in order to prevent the overload of the network under critical conditions (see p.0004, lines 10-19). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Gandhi to establish a threshold capacity and detecting when the capacity has been exceeded, as taught by Sauter, as both systems relate to determining cell capacity and load balance. This is beneficial in that overload conditions can be determined and adjusted depending on calling activity and cell congestion.

Regarding claims 6 and 15, the combination of Gandhi and Sauter disclose the method as described in claims 1 and 11, Gandhi fails to disclose establishing multiple threshold levels. In a related field of endeavor, Sauter teaches a method that monitors the load condition in the network at regular intervals and is compared with a first lower threshold value and an upper threshold value for determining the start and end of network congestion (see Fig. 2; abstract; p.0022; p.0025). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to establish multiple thresholds as suggested by Sauter, for determining different degrees of load in the base station according to the established thresholds.

Regarding claims 7 and 16, the combination of Gandhi and Sauter disclose the method as described in claims 6 and 15, Gandhi fails to expressly disclose establishing a threshold capacity for the tower and before said broadcasting step, the step of detecting when the calling activity has exceeded an established threshold capacity level for that tower. In a related field of endeavor, Sauter teaches that it is notoriously well known that in a wireless communication network, the load is checked at regular intervals and compared with a predetermined load threshold value, i.e. threshold capacity, and messages are broadcasted to subscribers to be barred from access, if the network load

exceeds said predetermined threshold, in order to prevent the overload of the network under critical conditions (see p.0004, lines 10-19). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Gandhi to establish a threshold capacity and detecting when the capacity has been exceeded before broadcasting the message, as taught by Sauter, as both systems relate to load monitoring, and furthermore since Gandhi broadcasts an availability message than may correspond with an overload condition on the reverse link and exceeding a load or capacity threshold indicates an overload condition.

Regarding claims 8 and 17, the combination of Gandhi and Sauter discloses the method as described in claims 7 and 16, Sauter discloses comprising the step of determining the closest threshold level that has been exceeded by the calling activity (p.0025; the network establishes a lower and a higher load threshold, the system continuously monitors the traffic in the network and compared to the thresholds). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include the step of determining the closest threshold level, i.e. lower threshold, has been exceeded by the calling activity as suggested by Sauter, in order to detect when the traffic, i.e. calling activity, in the cell starts increasing.

Regarding claims 9 and 18, the combination of Sawyer and Sauter discloses the method as described in claim 8 and 17, Gandhi fails to expressly disclose broadcasting the calling activity message (i.e. availability message) to wireless devices in the area of the tower corresponding to an exceeded threshold level. In a related field of endeavor, Sauter teaches that it is notoriously well known that in a wireless communication network, the load is checked at regular intervals and compared with a predetermined load threshold value, i.e. threshold capacity, and messages are broadcasted to subscribers to be barred from access, if the network load exceeds said predetermined threshold, in order to prevent the overload of the network under critical conditions (see p.0004, lines

10-19). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Gandhi to broadcast the calling activity level corresponding to an exceeded threshold level, as taught by Sauter, as both systems relate to load monitoring, and furthermore since Gandhi broadcasts an availability message than may correspond with an overload condition on the reverse link and exceeding a load or capacity threshold indicates an overload condition.

7. **Claims 4, 5, 10, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gandhi et al. in view of Sauter et al. , and further in view of Orlanmünder et al. (US 6,215,770 B1).

Regarding claims 4 and 14, the combination of Gandhi and Sauter disclose the method as described in claims 1 and 11, but fail to specifically disclose displaying the broadcasted message at a wireless device in the area of the tower. In a related field of endeavor, Orlanmünder teaches a method of transmitting an overload message to a terminal in response to an event of insufficient capacity to establish a connection, and which can be displayed in text form in the terminal (see abstract; col. 5, lines 54-61). Therefore, it would have been obvious to a person having ordinary skill in the art, to modify Gandhi for displaying in the wireless devices the connection availability message, as taught by Sauter, because displayed messages, i.e. text message, is a more reliable communication for conveying information since they are easily understand, rather than voice messages.

Regarding claim 5, the combination of Gandhi, Sauter, and Orlanmünder disclose the method as described in claim 4, Gandhi discloses wherein the display of the broadcasted message is a period event on the wireless device that corresponds to content of the calling availability through that tower (see p.0026-0027; p.0032-0033; the base station evaluates the reverse link load within regular time periods for broadcasting an availability message to wireless units).

Regarding claim 10, Gandhi discloses a system and system for accurately conveying wireless connection availability comprising:

a telephone tower for use in connecting wireless devices (see Fig. 2; p.0038; base station 60); a software routine within the telephone tower (see p.0072, lines 10-20),

said software routine capable of maintaining a count of the number of devices that are connected through the tower (see p.0026; Fig. 1, step 20; the base station accumulates information directed toward the reverse link loading, e.g. traffic loading, which corresponds with the number of wireless units accessing the system, i.e. count of wireless devices), and

broadcasting a message to wireless devices in the area related to the connection capability through that tower (see p.0027; p.0032-0033; the base station broadcasts an availability message that conveys to wireless units in a sector of the availability of base station's resources which is equivalent to the connection availability of the base station);

a wireless device for use in communicating via the telephone control tower (see Fig. 2; cellular wireless units 52-56), for receiving a message of connection availability via the tower (see p.0032).

However, Gandhi fail to disclose the tower detecting when the number of devices connected (i.e. measure of loading in a base station) via the tower exceed a predetermined threshold and software within the wireless device for displaying connection availability via the tower. In a related field of endeavor, Sauter teaches that it is notoriously well known that in a wireless communication network, the load is checked at regular intervals and compared with a predetermined load threshold value, i.e. threshold capacity, and messages are broadcasted to subscribers to be barred from access, if the network load exceeds said predetermined threshold, in order to prevent the overload of the network under critical conditions (see p.0004, lines 10-19). Therefore, it would have been obvious to

a person having ordinary skill in the art at the time of the invention, to modify Gandhi to detect when the number of devices (i.e. load) exceed a predetermined threshold, as taught by Sauter, as both systems relate to determining cell capacity and load balance. This is beneficial in that overload conditions can be determined and adjusted depending on the number of users accessing the system.

Also, in the same field of endeavor, Orlanmünder teaches a method of transmitting an overload message to a terminal in response to an event of insufficient capacity to establish a connection, and which can be displayed in text form in the terminal (see abstract; col. 5, lines 54-61). Therefore, it would have been obvious to a person having ordinary skill in the art, to modify Gandhi for displaying in the wireless devices the connection availability message, as taught by Sauter, because displayed messages, i.e. text message, is a more reliable communication for conveying information since they are easily understand, rather than voice messages.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marisol Figueroa
Art Unit 2617

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER